Vi3003 L2 Drop and Insert 1G 60W PoE++ 3-Port Switch User's Manual

MaxiiNet™ PoE Switches

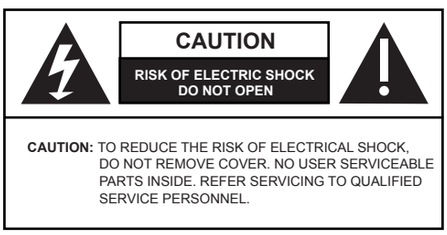
The Vi3003 is a 3-port Layer 2 Ethernet and PoE switch providing drop and insert capability for connecting several IP devices along a single cable run. The Vi3003 provides a cost effective method for increasing distances beyond the standard Ethernet limit of 328 feet (100m) for 10/100/1G Mbps Ethernet. Multiple units can be cascaded to provide up to nine IP cameras to be connected to a single network switch port over distances of up 3,000 feet (909m).

For small systems, the Vi3003's Layer 2 network capability can eliminate the need for network switches saving costs and rack space. It also can significantly decrease network switch costs by increasing the capacity of a 24-port switch to handle up to 216 cameras and an 8-port switch up to 72 cameras. As a mini network switch, the Vi3003 avoids the potentials for transmission collisions by complying with IEEE standards. Its ability to automatically sense the datarate up to 1000Mbps (1Gbps) also makes it the perfect solution for cost effectively extending network to network communi-cations or between network switches requiring high speeds transmission.

The Vi3003 can be powered from a single PoE source or a local power supply. Additional power up to 60W can be added at any point along the cable run where power outlets are available providing the ability to power IP cameras up to 60W.

Important Safety Warning

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Install in accordance with the manufacturer's instructions.
- This installation should be made by a qualified service person and should conform to all local codes.
- DO NOT bundle UTP or coax signals in the same conduit as high-voltage wiring.
- To reduce the risk of fire or electrical shock, do not expose these products to rain, moisture, dripping or splashing.
- No objects filled with liquids, such as vases, shall be placed on Vigitron equipment.
- DO NOT install the unit in a place where the operating ambient tempera ture exceeds 75°C.
- Make sure that the external power supply output voltage is in the recom mended range.
- Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus that produce heat.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a power supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- The power plug and the PoE input cable are used as the disconnect device and shall remain readily

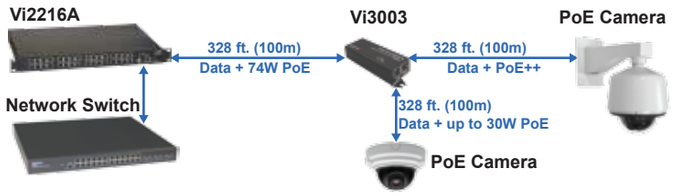

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

⚠ WARNING! - To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus.

⚠ WARNING! - This apparatus is a Class I product. This product must be connected to a main socket outlet through an AC to DC Power supply.

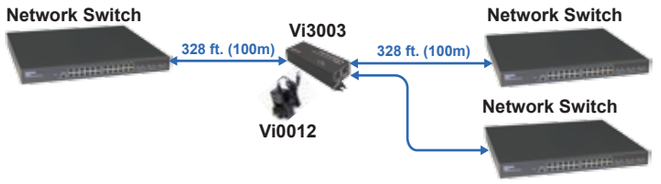
⚠ WARNING! - The main plug is used as the disconnect device and shall remain readily operable.

Application Drawings

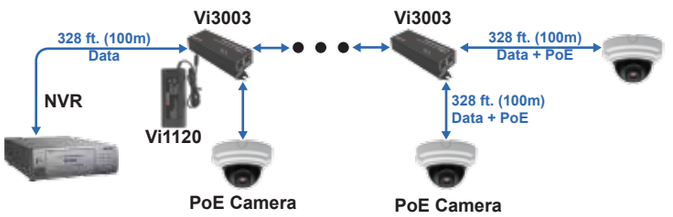


Vi3003 allows for the transmission of two cameras over a single camera run or adding a new camera close to an existing camera.

Vi3003 can provide over 60W PoE on port 1 and 30W PoE on port 3 using Vi1120 external power supply.



Vi3003 enables extension of 1G connection between networks.



A total of 9 IP addresses can be accessed on a single cable run, eliminating the need for network switches.

Installation (Powered by PoE)

a) Port-3 (Tab) Connection:

- Connect the IP camera's RJ45 connector to the Port-3 of Vi3003 using a standard Cat5/6 cable of maximum 100m in length. This port can provide up to 30W PoE power depending on the input PoE and the total load on the unit.

b) Port-2 (PoE-Out) Connection:

This port can be used to connect to another Vi3003 or a 60W camra.

- If you want to daisy-chain this unit with another Vi3003, connect Port-2 of Vi3003 to the Port-1 of the next Vi3003 using a standard Cat5/6 cable of maximum 100m in length. Port-2 will provide 1G Ethernet.
- If you want to connect this unit to a PoE++ camera, connect Port-2 of Vi3003 to the RJ45 connector of the IP camera using a standard Cat5/6 cable of maximum 100m in length. This port can provide up to 60W PoE power depending on the input PoE and the total load on the unit.

Caution

Do not connect a non-PoE device to the Port-2 of the Vi3003. Doing so may damage the non-PoE device.
If it is necessary to connect a non-PoE device to Port-2, use a Vi0024 between Port-2 and RJ45 connector of the non-PoE device.

c) Port-1 (PoE-In) Connection:

- Connect Port-1 of Vi3003 to the PoE switch or a high power PoE source using a standard Cat5/6 cable of maximum 100m in length. This port can receive up to 74W PoE and data 1Gbps.

Installation (Powered by Local Power Supply)

a) Port-3 (Tab) Connection:
- As “a” in previous section.

b) Port-2 (PoE-Out) Connection:
- As “b” in previous section.

c) Port-1 (PoE-In) Connection:
- Connect Port-1 of Vi3003 to the network switch using a standard Cat5/6 cable of maximum 100m in length.

d) Power Connection:
- Connect power connector to Vi1120 120W desktop power supply for using full PoE capacity of Vi3003. If the application does not provide PoE, a Vi0014 can be used for just powering the Vi3003.

Technical Specifications*

Electrical

PoE Rating	Port 1 (PoE In): 60W Port 2 (PoE Out): 60W Port 3 (Tab): 802.3af (15.4W), 802.3at (30W)
Network Connection	(3) RJ-45 IEC 60603-7
Wiring Support	Cat 5/5e/6
Power Consumption	3W
Supported Distance	328ft (100m) per link
Status LEDs	Power: Green 30W PoE Input: Orange 60W PoE Input: Orange Port 1: 1G (Green), Link/Act. (Yellow) Port 2 (Uplink): 1G(Green), Link/Act. (Yellow) Port 3 (Tab): 1G(Green), Link/Act. (Yellow)
Data Rate	Auto Configuring Port 1: 10/100/1000Base-TX Port 2: 10/100/1000Base-TX Port 3 (Tab): 10/100/1000Base-TX
Data Interfaces and	RFC 768 UDP, RFC 2068 HTTP
Compliances	RFC 793 TCP, RFC 791 IP RFC 1783 TFTP, RFC 894 IP over Ethernet RFC 2544 TCP/IP Packet Transmission IEEE802.3af, 8IEEE02.3at
IEEE Compliances	802.3ab, 802.3z, 802.3af, 802.3at, 802.1p, 802.1Q, 802.1D, 802.1s, 802.3u, 802.3x, 802.3w
Service Compliance	IPv4 Type of Service (TOS) and Differentiated Services (Diff-Serv) IPv6 Traffic Class
VLAN Support	4,096 Addresses
Jumbo Frame	Up to 10,000 bytes

Regulatory

Safety	CE
Environmental	RoHS, WEEE

Mechanical

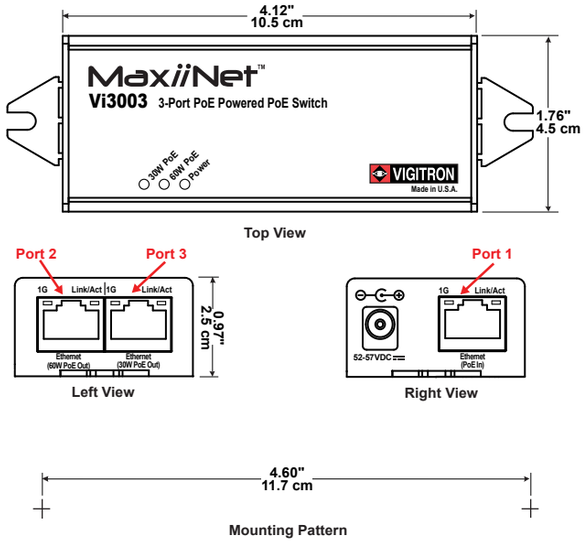
Dimensions	0.97x1.76x4.12 in., 2.5x4.5x10.5 cm (HxWxL)
Weight	0.26 lb, 117 g
Material	Extruded Aluminum

Environmental

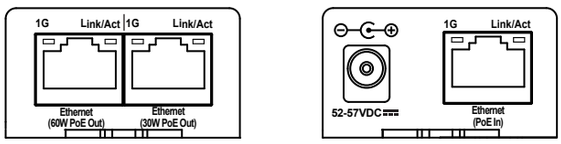
Humidity	0 to 95%, non-condensing
Temperature	Operating: -40°C to +75°C per NEMA-TS2 testing Storage: -40°C to +85°C

*Specifications subject to change without notice.

Drawings



Status LEDs



LED	Color	Statu	Function
Power	GREEN	OFF	The Vi3003 is off
		ON	The Vi3003 is on
60W PoE	YELLOW	OFF	No PoE is present on Port-2
		ON	PoE is present on Port-2
30W PoE	YELLOW	OFF	Port-3 PoE is off
		ON	Port-3 is delivering PoE
		FLASHING	PoE voltage is out of range
Ports 1,2,3	GREEN	OFF	10/100Mbps Connection when
	GREEN	ON	1000Mbps Connection
	ORANGE	OFF	No Link
	ORANGE	ON	Link flashes with Activity

Ordering Information

PART No.	Description
Vi3003	Drop and Insert 10/100/1000Mbps 60W PoE++ 3-Port Switch
Vi1120	Desktop power supply 56VDC @120W
Vi0017	Desktop power supply 48VDC @40W
Vi0012	Wall-mount power supply 12VDC @12W
Vi0024	PD Emulator for non-PoE devices

Limited Lifetime Warranty

Vigitron, Inc. warrants that all Vigitron products (“Product”), if used in accordance with these instructions, will be free of defects in material and workmanship for lifetime defined as the duration period of time until product end of life is announced. After which, Vigitron will continue to provide warranty services for a period of 3 years. Period covering valid warranty will be determined by proof of purchase in the form of an invoice from an authorized Vigitron dealer.

Warranty will only be provided for as long as the original end user purchaser owns the product. Warranty is not transferrable. At Vigitron's option, defective product will be repaired, replaced or substituted with a product of equal value. This warranty does not apply if, in the judgment of Vigitron, Inc., the Product fails due to damage from shipment, handling, storage, accident, abuse or misuse, or if it has been used or maintained not conforming to Product manual instructions, has been modified, or serial number removed or defaced. Repair by anyone other than Vigitron, Inc. or an approved agent will void this warranty. Vigitron, Inc. shall not under any circumstances be liable to any person for any incidental, indirect or consequential damages, including damages resulting from use or malfunction of the product, loss of profits or revenues or costs of replacement goods. The maximum liability of Vigitron, Inc. under this warranty is limited to the original purchase price of the Product only.

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